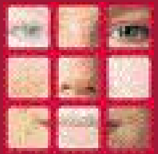


This month – 10 cases:

1. Orange Plaque on the Scalp p.33
2. Slowly Enlarging Plaque p.34
3. Painful Rash on Chest p.35
4. Asymptomatic, Erythematous Papules p.36
5. A Stain on the Forehead p.37
6. Generalized Pruritis in an Infant p.38
7. Intensely Pruritic Lesions p.40
8. A Thick, Pruritic Growth p.41
9. Rough Spots on the Palms and Soles p.42
10. Oral, White Patches p.44

Copyright©
Not for Sale or Commercial Distribution
Unauthorised use prohibited. Authorised users can download, display, view and print a single copy for personal use

Case 1

Orange Plaque on the Scalp

An 8-year-old female presents with an asymptomatic orange plaque on her scalp that has been present since birth. The plaque has grown as she has grown

What is your diagnosis?

a. Congenital melanocytic nevus
b. Port wine stain
c. Xanthoma
d. Nevus sebaceous
e. Xanthogranuloma

Answer

Nevus sebaceous **(answer d)** is a sharply circumscribed yellow-orange plaque that presents at birth, most commonly on the face or scalp. It is less common for the neck and face to be affected. Lesions are hairless and persist throughout life.

With age, a nevus sebaceous becomes more verrucous and there is a small possibility of developing benign tumours or even basal cell carcinoma. Approximately 0.3% of newborns are affected, and all races and both genders are similarly affected.

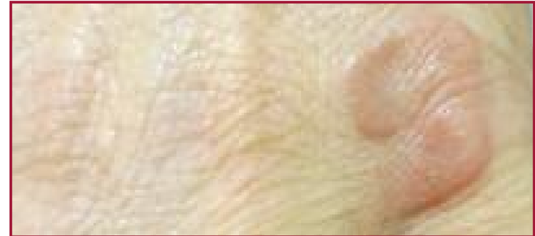
It is a clinical diagnosis, although occasionally a biopsy is needed to verify the diagnosis. Full-thickness excision has been the traditional treatment of choice, although watchful waiting and observation are also reasonable options. The development of a papule or nodule warrants biopsy or excision to rule out the development of a malignancy.

Benjamin Barankin, MD, FRCPC, is a Dermatologist practicing in Toronto, Ontario.

Case 2

Slowly Enlarging Plaque

A 42-year-old female presents with a slowly enlarging asymptomatic plaque on her dorsal hand of several months duration. Bacitracin/polymyxin and hydrocortisone have not helped, nor has tea tree oil.



What is your diagnosis?

a. Tinea manuum
b. Granuloma annulare
c. Basal cell carcinoma
d. Sarcoidosis

Answer

Granuloma annulare (GA) **(answer b)** is a benign, inflammatory skin condition that can affect all age groups. It is characterized by annular plaques (raised borders, central clearing) and/or dermal papules. The etiology is uncertain; although, the immune system is involved. The diagnosis is made clinically in many cases; although, a biopsy can be helpful when in doubt or with unusual presentations. Localized lesions are typically treated with intralesional triamcinolone acetonide and sometimes by potent topical steroids and/or liquid nitrogen cryotherapy. Generalized GA can be treated with phototherapy and sometimes oral retinoids.

Benjamin Barankin, MD, FRCPC, is a Dermatologist practicing in Toronto, Ontario.

Case 3

Painful Rash on Chest

A 57-year-old male presents to the ER with a painful rash of one day duration on his chest extending to midline anteriorly. The rash was preceded by some burning sensation.

What is your diagnosis?

a. Contact dermatitis
b. Tinea corporis
c. Herpes zoster

Answer

Herpes zoster **(answer c)** rash starts as erythematous papules following a dermatome. The papules usually change to vesicles or bullae within a short period of time and begin to crust within a week. They are generally limited to one dermatome.

Diagnosis is clinical; these lesions do not cross the midline in immunocompetent individuals.

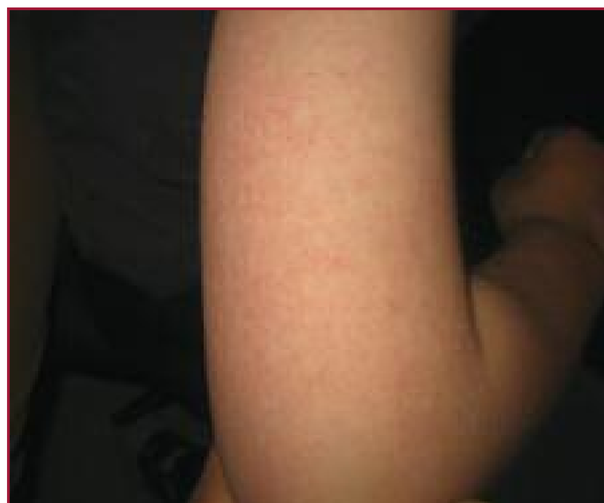
Antiviral therapy can reduce risk or severity of postherpetic neuralgia, facilitate healing of skin lesions, and reduce viral shedding, if started within 72 hours time. Acyclovir, famciclovir, and valacyclovir can be used and all are well tolerated.

Cherinet Seid, MD, LMCC, CCFP, DTM (RCPS Glas), is the Lead Physician of the North Renfrew Family Health Team, Deep River, Ontario, Emergency Physician at Deep River and District Hospital, and Assistant Professor at Northern Ontario School of Medicine, Sudbury, Ontario.

Case 4

Asymptomatic Erythematous Papules

A 7-year-old boy presents with skin coloured and erythematous papules over his outer arms, thighs, and cheeks. They have been present for the past three years, but have never bothered him. His mother and aunt have had similar lesions since they were children.



What is your diagnosis?

a. Early acne vulgaris
b. Keratosis pilaris
c. Atopic dermatitis
d. Ichthyosis vulgaris
e. Facial angiofibromas

Answer

Keratosis pilaris (KP) **(answer b)** is a common and benign skin condition that affects children as well as adults. It is often hereditary and affects multiple family members. It is caused by plugs of keratinous material in hair follicles and presents as small skin-coloured or erythematous papules distributed over follicles on the extensor surfaces of the upper arms, anterior thighs, buttocks, and cheeks. Although KP is typically asymptomatic, treatment may be provided for cosmetic purposes using keratolytic creams or lotions, which consist of urea, lactic acid, and glycolic acid preparations; gentle exfoliation with a loofah may also be tried. It is important to inform patients and their families that even though treatment may mitigate lesions, the effects are temporary, because KP is a lifelong condition that never fully remits.

Acne vulgaris is not a likely diagnosis since those lesions are usually distributed to the face and trunk, with sparing of the limbs. In addition, while the development of acne may be hereditary, multiple family members across generations being affected by it at the same time is unlikely.

While atopic dermatitis would be common in a seven-year-old boy, it is characteristically pruritic, and, thus, unlikely in this case. Furthermore, even though atopic dermatitis is commonly found on extensor surfaces in infants, this distribution shifts to affect mostly flexor surfaces in childhood.

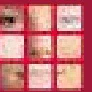
Ichthyosis vulgaris is a hereditary condition characterized by scales on the face and extensor surfaces of the limbs, which may be large and plate-like or white and bran-like. It is often found together in children with atopic dermatitis or KP, but the absence of scales discourages this diagnosis.

Angiofibromas are benign neoplasms of the dermis. Multiple facial angiofibromas are associated with tuberous sclerosis and multiple endocrine neoplasia type 1. The absence of any associated symptoms makes this condition unlikely.

It is important to remember that a diagnosis of KP does not exclude any of the other skin conditions that may occur concurrently with KP.

Willa Liao is a Pediatric Resident at McMaster University, Hamilton, Ontario.

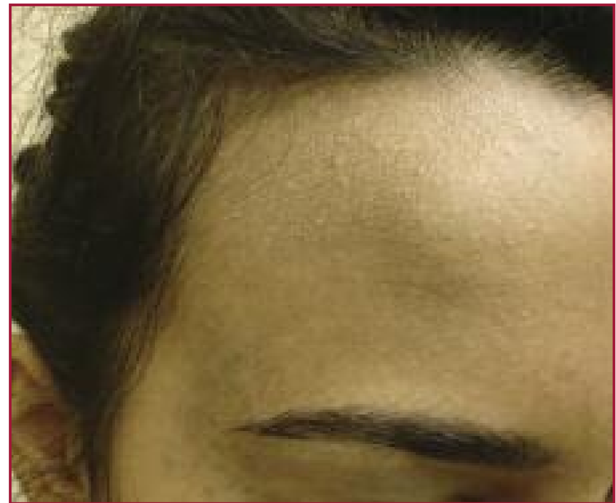
Joseph M. Lam is a Clinical Assistant Professor of Pediatrics and Dermatology in Vancouver, British Columbia.



Case 5

A Stain on the Forehead

This 30-year-old woman is uncomfortable with the appearance of a stain on the right side of her forehead. It first appeared during puberty.



What is your diagnosis?

a. Lentigo
b. Mongolian spot
c. Nevus of Ota
d. Melasma
e. Postinflammatory hyperpigmentation

Answer

Nevus of Ota **(answer c)** is most commonly seen in individuals of Asian descent. It may involve either the V1 or V2 branch of the ophthalmic nerve distribution. It is thought to be a hamartoma of dermal melanocytes and, in this regard, it is similar to a Mongolian spot mostly noted in East Asians. Nevus of Ota generally presents in the lumbar area.

Onset usually occurs in early infancy or adolescence and is much more common in females. The reason for this is unknown.

It is generally unproblematic save for emotional issues regarding its appearance. In extremely rare circumstances, there have been reports of glaucoma or melanoma associated with it.

Recently, laser surgery has been succesful in reducing the colour by reducing the dermal melanocytes. Several treatments are required.

Stanley Wine, MD, FRCPC, is a Dermatologist in North York, Ontario.

Case 6

Generalized Pruritus in an Infant

A three-month-old develops generalized pruritis, which has been present for the past three weeks. She is unresponsive to topical steroids. Also, the whole family is itchy.

What is your diagnosis?

a. Atopic dermatitis
b. Impetigo
c. Allergic contact dermatitis
d. Eczema herpeticum
e. Scabies

Answer

Scabies **(answer e)** is a common skin infestation caused by the mite *Sarcoptes scabiei*. This mite is an obligate human parasite, residing in burrowed tunnels within the human epidermis.

Scabies is transmitted by direct contact with an infested individual; although, it may also be transmitted via fomites, such as bedding and clothing. The initial symptom of scabies is usually pruritus, worsening at night time, which is often evident well before clinical signs become apparent. Infants may also experience irritability and poor feeding.

The skin findings include papules, nodules, burrows, and vesiculopustules. In infants, lesions may be seen on the head and commonly involve the palms, soles, and axillae. In older children and adolescents, the most common sites of involvement are the wrists, interdigital spaces, and waist. Vesicles are often found in infants and young children. Excoriations are also commonly seen.

The treatment of choice for scabies is 5% permethrin cream, which is applied from the neck down and left on for 8 to 14 hours, then thoroughly rinsed. Treatment of all people in close contact with the infected child is recommended to minimize ongoing propagation of the infestation.

This is unlikely to be impetigo, a common, contagious, superficial skin infection caused by *Streptococci*, *Staphylococci*, or both. It usually does not present with pruritis and more frequently presents as blisters or pustules with honey coloured crusting on exposed parts of the body, including the face, hands, neck, and extremities.

This is also unlikely to be eczema herpeticum, which is a severe, disseminated Herpes Simplex Virus infection that occurs in individuals with atopic dermatitis or other chronic skin diseases. These patients will present with abrupt onset of fever, malaise, and a widespread eruption of monomorphous vesicles and erosion.

Essential features of atopic dermatitis include pruritus and eczematous changes. In children, the most commonly affected areas include the face, neck, and extensors; while in older children, the flexural surfaces tend to show more involvement. There is often a history of atopy as well. However, the acute onset of pruritis in the family and the presence of burrows, points to a more transmissible or infectious cause.

Allergic contact dermatitis represents a type IV immunologic reaction or delayed hypersensitivity. It is characterized by sensitization to an offending allergen, leading to the development of skin lesions on exposed areas. The skin lesions will develop upon re-exposure to the substance. Allergic contact dermatitis is not likely to be the case here, given the presence of rash in the family and the absence of a contact allergen.

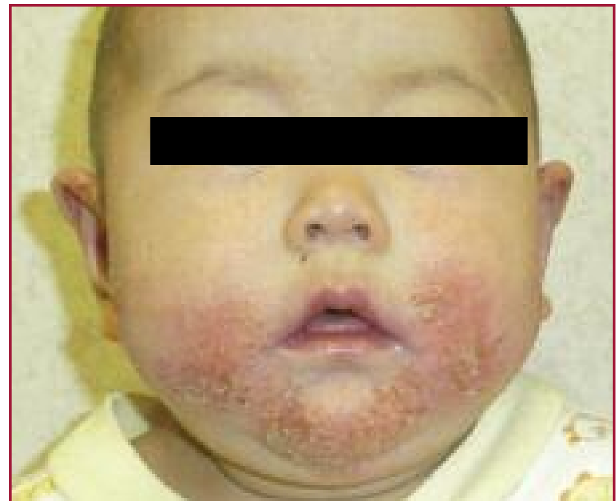
Tram Nguyen is a 3rd year Pediatric resident at McMaster University, Hamilton, Ontario.

Joseph M Lam is Clinical Assistant Professor of Pediatrics and Dermatology at the University of British Columbia. He practices in Vancouver, British Columbia.

Case 7

Intensely Pruritic Lesions

A four-month-old girl presents with intensely pruritic lesions on the face, legs, and trunk. There is no lesion in the diaper area. Her 13-year-old brother has similar pruritic lesions on the elbow and popliteal areas.



What is your diagnosis?

a. Atopic dermatitis
b. Seborrheic dermatitis
c. Psoriasis
d. Nummular eczema

Answer

Intense pruritus and cutaneous reactivity are hallmarks of atopic dermatitis **(answer a)**. In infants, the eruption often affects the face and scalp; although, the extensor surfaces of the extremities and the trunk may also be affected. Lesions are classified as acute, subacute, or chronic and are usually symmetrical. Acute lesions are intensely pruritic, erythematous papules, papulovesicles, or weeping lesions. Subacute lesions are erythematous, scaling papules or excoriated plaques.

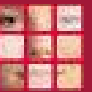
Chronic lesions are characterized by prominent scaling, excoriations, and lichenification in classically affected body areas. The lesions in seborrheic dermatitis are usually asymptomatic and consist of an accumulation of yellow, greasy scales. In contrast, the lesions in atopic dermatitis is pruritic, the scales are dry, and excoriations are frequent.

The diaper area may be involved in seborrheic dermatitis; whereas, it is typically spared in atopic dermatitis. In infants and children, psoriasis often presents in the diaper area, elbows, knees, and scalp. The lesion is characterized by sharply demarcated erythematous plaques. The thick, silvery scales seen in adults are not common in infancy and early childhood.

In atopic dermatitis, involvement of the diaper area is unusual, and the lesions are always pruritic and poorly demarcated. Nummular eczema is characterized by coin-shaped, eczematous plaques. The condition is rare in the first year of life. The onset peaks between 15- and-25-years-of-age and again between 55- and-65-years-of-age. The lesions are usually located on the extensor surfaces of the lower extremities and are often symmetrical.

Alexander K.C. Leung, MBBS, FRCPC, FRCP (UK and Irel), is a Clinical Professor of Pediatrics, University of Calgary, Calgary, Alberta.

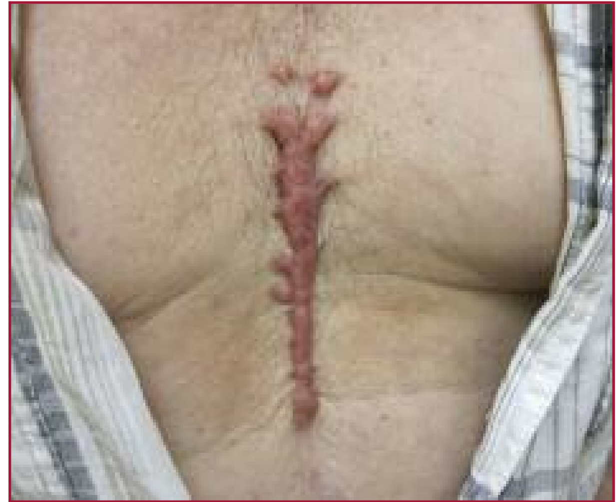
David Low, MD, is a Medical Resident at the University of Calgary, Calgary, Alberta.



Case 8

A Thick, Pruritic Growth

A 64-year-old male developed a thick, pruritic growth on his chest following heart surgery.



What is your diagnosis?

a. Hypertrophic scar
b. Pilar cyst
c. Keloid scar
d. Dermatofibroma
e. Linear epidermal nevus

Answer

A keloid scar **(answer c)** is an overgrowth of dense, fibrous tissue that develops following the healing of a skin injury (*e.g.,* acne scar, ear piercing, coronary artery bypass graft surgery). The tissue extends beyond the borders of the original wound, does not regress spontaneously, and often recurs after excision.

Keloids are primarily of cosmetic concern; although, depending on the location, they can cause contractures and reduced functionality. They are often pruritic and can even be painful.

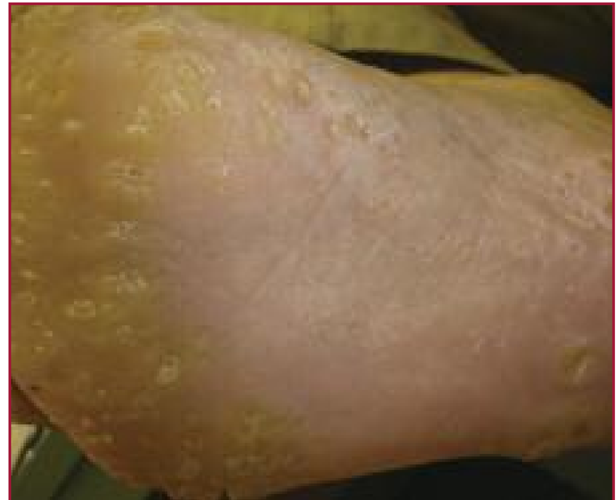
No single treatment is best for all types of keloids. Prevention is key, but therapeutic treatment of keloids includes corticosteroid injections (most common), potent topical steroids (much less effective than intralesional), occlusive and compression dressings (silicone sheets), excision, radiation therapy, laser therapy, and topical imiquimod 5% cream (usually combined with surgery).

Benjamin Barankin, MD, FRCPC, is a Dermatologist practicing in Toronto, Ontario.

Case 9

Rough Spots on the Palms and Soles

This 50-year-old male has had rough spots on his palms and soles since his early teens. His mother had similar lesions.



What is your diagnosis?

a. Verruca
b. Friction corns
c. Psoriasis
d. Ichthosis
e. Hereditary punctate palmoplantar keratoderma

Answer

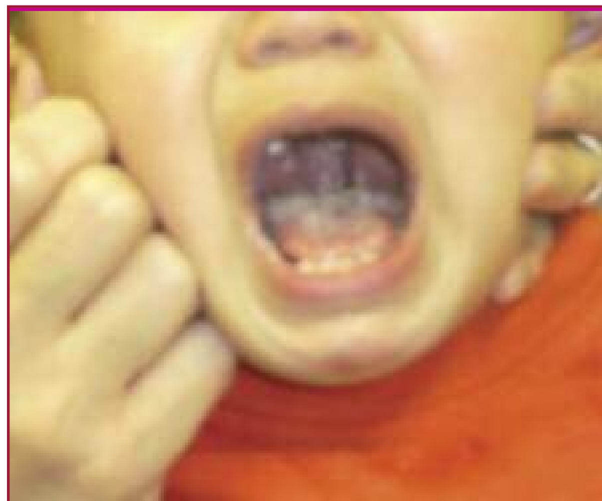
The consistent prominence and number of keratotic lesions present over so many years points to the diagnosis of hereditary punctate palmoplantar keratoderma (HPPK) **(answer e)**. The lesions, which typically range in size from 1 to 10 mm, appear on both the palms and soles.

It is thought that it is caused by genetic mutations, but the pathways have not been well studied. There are multiple variants of such palmoplantar disorders, many associated with congenital disorders. Other than regular trimming of the elevated papules, there is no specific therapy; however, emollients and keratolytics help for milder variants of this condition.

Stanley Wine, MD, FRCPC, is a Dermatologist in North York, Ontario.

Case 10

Oral, White Patches



It is noted that a six-month-old boy has white patches on the buccal mucosa, tongue, and hard palate during a routine physical examination. The infant was born at term with a birth weight of 3.1 kg. He had otitis media two weeks ago and was treated with a 10 day course of amoxicillin. The infant appears healthy otherwise and is asymptomatic.

What is your diagnosis?

a. Oral candidiasis
b. Oral mucositis
c. Oral leukoplakia
d. Milk curd

Answer

Oral candidiasis (oral thrush) **(answer a)** affects 2 to 5% of otherwise healthy newborn infants. The incidence is much higher in premature and very low birth weight infants. Oral candidiasis is uncommon after 12-months-of-age, except for in children who are at risk. Risk factors include the use of broad-spectrum antibiotics, inhaled or systemic corticosteroids, diabetes mellitus, xerostomia, and immunodeficiency. Several species of *Candida* can colonize the oral cavity and result in candidiasis. *Candida albicans* is the species most often associated with oral candidiasis. The most common presentation is pseudomembranous candidiasis (thrush), which is characterized by white, curd-like, discrete plaques on any part of the oral mucosa.

Erythematous candidiasis is characterized by smooth erythematous patches seen most often on the palate, gum, and the dorsum of the tongue. Oral candidiasis is usually asymptomatic. Some infants may experience fussiness, decreased feeding, and refusal to feed. Older children may complain of a sore mouth or a burning sensation in the mouth. In immunocompetent children, oral candidiasis usually responds well to oral nystatin suspension or clotrimazole troches applied to lesions. For recalcitrant or recurrent infections, and for immunocompromised individuals, fluconazole, itraconazole, or ketoconazole can be prescribed.

Alexander K.C. Leung, MBBS, FRCPC, FRCP (UK&Irel), FRCPCH, is a Clinical Professor of Pediatrics, at the University of Calgary, Calgary, Alberta.

Shahbaz Syed is a Medical Student at the University of Calgary, Calgary, Alberta.

cme